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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,567	01/29/2004	Robert L. Beasley	7452-US1	6348

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EXAMINER
WANG, JIN CHENG

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/768,567	BEASLEY ET AL.	
	Examiner	Art Unit	
	Jin-Cheng Wang	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/8/2006 has been entered. Claim 1 has been amended. Claims 1-2 are pending in the application.

Response to Arguments

Applicant's arguments filed March 8, 2006 have been fully considered but are moot in view of the new ground(s) of rejection of the amended claim 1 based on Alexander U.S. Patent No. 6,201,384 (hereinafter Alexander) in view of Engholm et al. U.S. Patent No. 6,642,936 (hereinafter Engholm).

In response to applicant's arguments that Alexander does not teach the claim limitation of "long data record", However, Alexander teaches in Figs. 3A and column 7-9 that the **waveform** display region 302 is divided into ten "LONG" data records or divisions along the horizontal axis and a displayed waveform meets the claim limitation of "long data records".

Although a single pulse waveform is displayed in Fig. 3A, any waveform with arbitrary number of pulses from the digital oscilloscope 100 can be displayed and thus the cited reference teaches "the long data record" as a displayed waveform because **any waveform meets the claim limitation of "long data record"**.

In response to applicant's arguments that Alexander does not have "an associated marker that spans the zoom region and has at least a minimum length", Alexander teaches the marker indicators encompassing the boundary of the rescaling rectangle and thus the rescaling rectangle is marked, i.e., a region of a waveform is marked and the marker around the waveform region spans the waveform regions and has at least a minimum width and length of the waveform region. Moreover, the marker indicators along the boundary of the rescaling rectangle spans the width and may have a length of **at least one pixel** because the line is color-marked and color-marking requires the pixels along the line to be changed and thus the marker indicator along the boundary of the rescaling rectangle spanning the width having a length of at least one pixel to indicate the color changes when necessary; see column 9, lines 63-67; column 10, lines 1-7 and column 15, lines 45-50.

Although Alexander does not explicitly disclose the minimum length of the associated marker sufficient to enable a user to readily point to it in order to select and manipulate the zoom region. Alexander may implicitly teach or at least suggest the claim limitation. Alexander teaches in column 15, lines 40-50 that the rescaling rectangle is user-created through the use of a cursor control device and the user may delineate the boundaries of the rescaling rectangle using marker indicators or through the use of any other well-known graphical or other means. Alexander discloses that the user preferably invokes waveform scaling through the selection of an arbitrary point within the rescaling rectangle and a particular key stroke may be provided as a means for the user to communicate this selection (column 10, lines 40-50).

However, Engholm explicitly discloses the minimum length of the associated marker sufficient to enable a user to readily point to it in order to select and manipulate the zoom region

(See Engholm Figs. 1-3) having a path marking the zoom rectangle and two symbols 18, 20 appear superimposed on the graphics display screen for zoom in/out of the marked rectangle of the waveform regions.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have incorporated Engholm's teaching into Alexander because Alexander at least suggests the claim limitation. Alexander teaches the marker indicators encompassing the boundary of the rescaling rectangle and thus the rescaling rectangle is marked, i.e., a region of a waveform is marked and the marker around the waveform region spans the waveform regions and has at least a minimum width and length of the waveform region. Moreover, Engholm teaches other claim limitations set forth in the claim 1 including displaying the long data record as a display waveform (See Engholm Figs. 1-3), displaying a portion of the displayed waveform defined by the zoom region as a zoomed waveform and manipulating the zoom region by moving the associated marker along the displayed waveform with a pointer device to display other portions of the displayed waveform as the zoomed waveform (See Engholm Figs. 1-3 and column 2).

One of the ordinary skill in the art would have been motivated to do so to easily allow the user to point to it to zoom the selected zoom rectangle (**Engholm column 2, lines 5-28**).

Applicant argues with respect to the claim 2 that there is no reason for Alexander to display the rescaled waveform in a different color from the original waveform since only one or the other is displayed at any time. In contrary to applicant's assertion, Alexander discloses in column 7 the color of the marker is rendered at the pixel location providing a display that

appears to **show the marker over the waveform** and in column 15 that multiple rescaling rectangles are displayed **simultaneously** and allocating portions of the waveform display for other uses. **Therefore, different waveforms are displayed within the different rescaling rectangle simultaneously with the waveforms are colore-marked *(see column 9, lines 63-67; column 10, lines 1-7 and column 15, lines 45-50).***

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander U.S. Patent No. 6,201,384 (hereinafter Alexander) in view of Engholm et al. U.S. Patent No. 6,642,936 (hereinafter Engholm).

Claim 1:

Alexander teaches a method of indicating and manipulating a zoom region within a long data record comprising:

Displaying the long data record as a displayed waveform (*Figs. 3A and column 7-9 wherein the waveform display region 302 is divided into ten "LONG" data records or divisions along the horizontal axis. Although a single pulse waveform is displayed in Fig. 3A, it appears from the teaching of the cited reference that any waveform with arbitrary number of pulses from*

the digital oscilloscope 100 can be displayed and thus the cited reference teaches "the long data record" as a displayed waveform because any waveform meets the claim limitation of "long data record");

In response to zoom data which defines a location and scale for the zoom region (*e.g., defining the starting point and ending point by the pointing device and defining vertical and horizontal scaling; Figs. 2-3(B) and column 9, lines 53-67 and column 10, lines 1-67*), displaying a zoom region indicator (*zoom region marker as described in column 7, lines 30-67*) representing the zoom region with the displayed waveform (*the rescaling rectangle is a zoom region with the displayed waveform shown in Fig. 3(A)*), the zoom region indicator (*the zoom region marker*) having a width (*e.g., a rectangular pixel area is typically defined within DRAM 148 with the programmed color, typically dark gray; column 8, lines 1-16; the rescaling rectangle on the waveform display region 302 can be distinguished from the displayed waveforms by a particular color and line configuration, such as dashes; see column 9, lines 63-67 and column 10, lines 1-7 wherein the rectangle pixel area has a width*) an associated marker which spans the width of the zoom region (*e.g., column 15, lines 45-50 teaches that the user may delineate the boundaries of the rescaling rectangle* ***using marker indicators*** *or* ***through the use of any other well-known graphical or other means***) and has at least a minimum length (*e.g., the marker indicators encompassing the boundary of the rescaling rectangle and thus a width and a length. Moreover, the marker indicators along the low side of the rescaling rectangle spans the width and may have a length of at least one pixel because the line is color-marked and color-marking requires the pixels along the line to be changed and thus the marker indicator along the low side of the rescaling rectangle spanning the width having at least a length of one pixel to*

indicate the color changes when necessary; see column 9, lines 63-67; column 10, lines 1-7 and column 15, lines 45-50);

Displaying a portion of the displayed waveform defined by the zoom region as a zoomed waveform (*e.g., displaying the rescaled rectangle of the displayed waveform defined by the zoom region as a zoomed waveform shown in Fig. 3(B) as the entire waveform display region and column 11, lines 56-67*); and

Manipulating the zoom region by moving the associated marker with a pointer device to display other portions of the displayed waveform as the zoomed waveform (*e.g., the graphical user interface through the selection of menu items, key strokes, voice activation, and through the use of any type of input device such as the point device 110 allows manipulating the zoom region by toggling between the original and new scaling and undoing or redoing the scaling dictated by the rescaling rectangle 310 and return the waveforms and display element to their original scaling; column 12, lines 23-67; the user may deselect waveform scaling through the selection of an arbitrary point outside of the rescaling rectangle 310; see column 10, lines 36-59; and the user further selects the zoom region using the cursor; column 12, lines 1-67 and this process of selecting and deselecting continues*).

Alexander does not explicitly disclose the minimum length of the associated marker sufficient to enable a user to readily point to it in order to select and manipulate the zoom region. Alexander teaches in column 15, lines 40-50 that the rescaling rectangle is user-created through the use of a cursor control device and the user may delineate the boundaries of the rescaling rectangle using marker indicators or through the use of any other well-known graphical or other means. **Alexander discloses a marked region of the zoom rectangle** and the user preferably

invokes waveform scaling through the selection of an arbitrary point within the rescaling rectangle and a particular key stroke may be provided as a means for the user to communicate this selection (column 10, lines 40-50).

However, Engholm explicitly discloses the minimum length of the associated marker sufficient to enable a user to readily point to it in order to select and manipulate the zoom region (See Engholm Figs. 1-3) having a path marking the zoom rectangle and two symbols 18, 20 appear superimposed on the graphics display screen for zoom in/out of the marked rectangle of the waveform regions.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have incorporated Engholm's teaching into Alexander because Alexander at least suggests the claim limitation. Alexander teaches the marker indicators encompassing the boundary of the rescaling rectangle and thus the rescaling rectangle is marked, i.e., a region of a waveform is marked and the marker around the waveform region spans the waveform regions and has at least a minimum width and length of the waveform region. Moreover, Engholm teaches other claim limitations set forth in the claim 1 including displaying the long data record as a display waveform (See Engholm Figs. 1-3), displaying a portion of the displayed waveform defined by the zoom region as a zoomed waveform and manipulating the zoom region by moving the associated marker along the displayed waveform with a pointer device to display other portions of the displayed waveform as the zoomed waveform (See Engholm Figs. 1-3 and column 2).

One of the ordinary skill in the art would have been motivated to do so to easily allow the user to point to it to zoom the selected zoom rectangle (**Engholm column 2, lines 5-28**).

Claim 2:

Alexander further discloses displaying the zoomed waveform in a different color from one used to display the displayed waveform (*e.g., the priority encoder sends the selected color to the VRAM 146 which then causes the pixel to be rendered in the indicated color and a rectangular pixel area is typically defined within DRAM 148 with the programmed color typically dark gray; see column 7, lines 30-67 and column 8, lines 1-16; column 9, lines 63-67 and column 10, lines 1-7 and Alexander discloses in column 7 the color of the marker is rendered at the pixel location providing a display that appears to show the marker over the waveform and in column 15 that multiple rescaling rectangles are displayed simultaneously and allocating portions of the waveform display for other uses. **Therefore, different waveforms are displayed within the different rescaling rectangle simultaneously with the waveforms are colore-marked***) with the zoom region indicator being displayed in the different color (*e.g., the color the marker is rendered at the pixel location providing a display that appears to show the marker over the waveform; column 7, lines 30-67 and column 8, lines 1-16; column 9, lines 63-67 and column 10, lines 1-7; e.g., column 15, lines 45-50 teaches that the user may delineate the boundaries of the rescaling rectangle **using marker indicators** or **through the use of any other well-known graphical or other means***) and has at least a minimum length (*e.g., the marker indicators encompassing the boundary of the rescaling rectangle and thus a width and a length. Moreover, the marker indicators along the boundary of the rescaling rectangle spans the width*

and may have a length of ***at least one pixel*** *because the line is color-marked and color-marking requires the pixels along the line to be changed and thus the marker indicator along the boundary of the rescaling rectangle spanning the width having a length of at least one pixel to indicate the color changes when necessary;* ***see column 9, lines 63-67; column 10, lines 1-7 and column 15, lines 45-50***).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw Jincheng Wang